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Attorneys for Plaintiffs,
JESUS ROMERO, et al.

UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF CALIFORNIA

JESUS ROMERO, a Minor, by and through his Guardian ad Litem, MERIDA RAMOS; MARCOS ROMERO, a Minor, by and through his Guardian ad Litem, MERIDA RAMOS; and PERLA ROMERO, a Minor, by and through her Guardian ad Litem, MERIDA RAMOS,

Plaintiffs,

v.

MACY'S, INC., fka FEDERATED DEPARTMENT STORES, INC., a Delaware corporation; RALPH LAUREN CORPORATION, a Delaware corporation; and DOES 1 through 50, Inclusive,

Defendants.

Case No. 3:15-cv-00815-GPC-MDD

DECLARATION OF ANDREW D. ELLISON, P.E., CFEI, IN SUPPORT OF PLAINTIFFS' OPPOSITION TO DEFENDANTS MACY'S INC., ET AL.'S MOTION FOR SUMMARY JUDGMENT

DATE: September 23, 2016
TIME: 1:30 p.m.
CTRM: 2D

JUDGE: Hon. Gonzalo P. Curiel

I, Mr. Andrew D. Ellison, declare as follows:

1. The facts declared herein are true of my own knowledge and, if called upon to testify, I could and would testify competently thereto.

2. A true and correct copy of my current *curriculum vitae* is attached to Plaintiffs' Compendium of Evidence in Opposition to Motion for Summary Judgment ("Plaintiffs' Evidence") as **Exhibit 15**.

3. I graduated from Worcester Polytechnic Institute, where I obtained a Bachelor of Science degree in Mechanical Engineering (2006), and a Master of Science degree in Fire Protection Engineering (2008). While a student at WPI, I worked to develop test methods to evaluate the performance of fabrics and garments under fire assault.

4. After completing my Bachelor of Science degree, I was employed by the United States Navy at Soldier Systems Center in Natick, MA. My duties were to perform research and testing on uniforms and protective clothing and equipment of warfighters. The majority of my work focused on flammability and thermal protective personal protective clothing (PPE). I also continued my work developing test methods for fabrics and garments under fire assault.

5. Since 2007, I have consulted for clients on fire cause and origin, mechanical & fire protection engineering, human skin burns, and fabric flammability. I have been involved in hundreds of investigations related to fires, explosions, and personal injuries. In 2016 I joined Unified Investigations & Sciences, LLC as a Senior Forensic Engineer.

6. I have published numerous papers on burning behavior and flame spread. A full list of my publications is available in Exhibit 15 to Plaintiffs' Evidence.

7. I have been a member of multiple standards development organizations and a member of technical committees including:

a. American Society of Testing and Materials (ASTM):

i. Committee F23 on Personal Protective Clothing & Equipment

ii. Committee D13 on Textiles, and

iii. Committee C16 on Thermal Insulation.

b. National Fire Protection Association (NFPA):

i. Technical Committee on Wildland Fire Fighting Protective Clothing and Equipment (Past Principal Member)

ii. Technical Committee on Flash Fire Protective Garments (Past Alternate Member)

iii. Technical Committee on Fire Hose (Chair)

iv. Technical Committee on Fundamentals of Fire Control within a Structure Utilizing Fire Dynamics (Principal Member).

8. It has been represented to me that:

a. Jesus Romero suffered 2nd degree burns over nearly 25% of his body when a boys' Ralph Lauren gingham shirt ("the Subject Shirt") that he was wearing ignited.

b. The Subject Shirt was labeled to be made of 100% Cotton fibers.

c. The Subject Shirt, when tested, was found to have a significant nylon and rayon fiber content.

d. A fabric sample of the Subject Shirt had an areal density of between 2.51 and 2.79 ounces per square yard.

9. The Flammables Fabric Act (the Act), as codified in 16 C.F.R. 1610 was enacted to prevent dangerously flammable clothing textiles from being imported, manufactured, or sold for use as garments within the United States.

a. The tests outlined in the Act represent *minimum* thresholds that all fabrics must meet in order to be included in garments sold within the United

States. The Act was enacted to prohibit the importation, sale, or manufacture of wearing apparel which exhibit "rapid and intense burning" and is therefore "so highly flammable as to be dangerous when worn by individuals."[1]

b. The Act's threshold minimum requirements were not intended to, nor do they purport to, represent the delineation between safe and unsafe clothing textiles in all applications.

10. The Act allows an exemption from testing for "plain surface fabrics, regardless of fiber content, weighing 2.6 ounces per square yard, or more." The Act states that this exemption is because "experience gained from years of testing in accordance with the Standard demonstrates that certain fabrics consistently yield acceptable results." The Act does not state that all such fabrics should be considered as having "normal flammability" characteristics, but simply exempts them from being subjected to the Act's testing requirements.

11. Different fabrics, even those which pass the testing codified in the Act, perform differently when ignited. Some fabrics may burn faster, others may melt and drip, and others may self-extinguish. This is true for textiles of any areal density, even those above 2.6 ounces per square yard.

12. Simply passing the limited testing required by the Act, or being excluded from testing requirements, does not define a safe garment for all uses.

13. The fiber content in a garment can greatly influence a textile's burning characteristics. [2] Consumers may rely upon the information provided to them by the manufacturer regarding fiber content, including the markings of the tag, to select a proper garment for the expected use.

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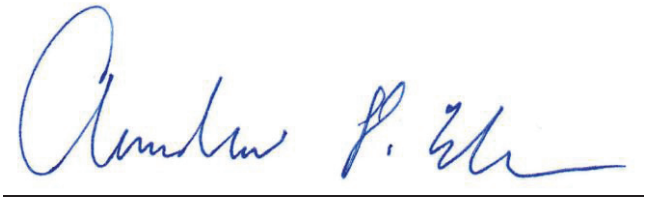
[1] 16 CFR 1610.1(d)

[2] Goynes & Trask. *Effects of Heat on Cotton, Polyester, and Wool Fibers in Blended Fabrics – A Scanning Microscope Study.* Textile Research Journal. July 1985. Pg 402.

15. Fabrics made up of blends of multiple fibers may have unpredictable burning characteristics. As such, flammability testing of a particular blend is necessary in order to determine its precise burning behavior.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed August 12, 2016 at Hamilton, MA.



Mr. Andrew D. Ellison